

REMARKS

The Examiner's indication of allowable subject matter of claims 8 and 17-20 is noted with appreciation.

Claims 1-9, 12, and 14-28 are pending in the application. Claims 10, 11 and 13 have been cancelled. Claim 7 has been rewritten in independent form including all limitations of base claim 1. Independent claims 1, 5, and 9 have been amended to better define the claimed invention. Claims 22-28 have been added to provide Applicants with the scope of protection to which they are believed entitled. No new matter has been introduced through the foregoing amendments.

Claims 8 and 17-20 are allowed as indicated in the Office Action. New claim 25 depends from claim 8 and should also be considered allowable.

The art rejections relying primarily on U.S. Patent No. 5,303,865 to *Bert* are noted.

Independent claim 1 has been amended to define over *Bert*. In particular, amended independent claim 1 now recites that "**said coating liquid is a solution of a solvent and said accessory liquid is said solvent.**" *See* page 3, lines 6-7; and page 5, lines 16-18 of the specification. *Bert* does not fairly teach or disclose the newly added feature. In *Bert*, an unatomized stream of catalyst is directed into the resin stream. The resin and the catalyst are co-reactants (column 1, lines 50-51) and are not disclosed or suggested to be related as a solution of a solvent and the solvent in the presently claimed manner. Thus, amended independent claim 1 is patentable over the applied references including *Bert*.

Claims 2-4, 6 and 21-24 depend from claim 1, and are considered patentable at least for the reason advanced with respect to amended claim 1. Claims 2-4, 6 and 21-24 are also patentable on their own merits since these claims recite other features of the invention neither disclosed, taught nor suggested by the applied art.

As to claim 22, the applied references, especially *Bert*, fail to disclose, teach or suggest that the accessory liquid is **water**.

As to claim 23, the applied references, especially *Bert*, fail to disclose, teach or suggest that the accessory liquid is **atomized**. *Bert* teaches away from the invention of claim 22. See column 2, lines 1-6 of *Bert*.

As to claim 24, the applied references, especially *Bert*, fail to disclose, teach or suggest the limitations of claim 24 which are similar to allowable claim 8.

The rejection of independent claim 5 is traversed, because the applied references, especially *Bert*, fail to disclose, teach or suggest the steps of **depositing at least a portion of the accessory liquid on an external surface of the liquid atomizer**; and using the external surface of said atomizer to guide said portion of the accessory liquid into the spray jet. In *Bert*, the catalysts are not deposited on the external surface of the spray tip 32. According to *Bert*, an unatomized stream of the catalyst is directed to impinge against the resin stream adjacent to and downstream from the fluid tip. See column 2, lines 44-46; column 4, lines 65 through column 5, line 2; and column 5, lines 20-26 of *Bert*. That is, the catalyst is deposited directly into the resin spray, unlike the claimed invention where a portion of the accessory liquid is indirectly deposited via the external surface of the atomizer. Thus, independent claim 5 is patentable over the applied references including *Bert*.

The rejection of claim 7 is traversed, because the applied references, especially *Bert*, fail to disclose, teach or suggest the step of **dripping** the accessory liquid onto the **external surface** of the atomizing element. In *Bert*, the catalysts are not deposited on the external surface of the spray tip 32 as discussed immediately above. In addition, the reference fails to disclose, teach or suggest the dripping step. Thus, independent claim 7 is patentable over the applied references including *Bert*.

Independent claim 9 has been amended to define over *Bert*. In particular, amended independent claim 9 now recites that “said at least one discharge outlet **points towards a location**

on the external surface of said font end of said liquid atomizer, said location being rearwardly spaced from said atomizing edge, thereby allowing the accessory liquid to be deposited on the external surface and to be guide by the external surface forwardly into the spray jet.” In other words, at least one of the accessory liquid discharge outlets is directed to a point upstream of the atomizing edge. *Bert* does not fairly teach or disclose the newly added feature, because, in *Bert*, a longitudinal axis of a catalyst injector nozzle passage that leads to the circular catalyst outlet orifice 92 extends substantially immediately adjacent to and downstream from the forwardmost end of the airless spray tip 32 and perpendicular to the major axis of the elliptical orifice. See column 5, lines 20-26 of *Bert*. Thus, independent claim 9 is patentable over the applied references including *Bert*.

Claims 12, 14-16 and 27-28 depend from claim 9, and are considered patentable at least for the reason advanced with respect to amended claim 9. Claims 12, 14-16 and 27-28 are also patentable on their own merits since these claims recite other features of the invention neither disclosed, taught nor suggested by the applied art.

As to claim 15, the applied references, especially *Bert*, fail to disclose, teach or suggest that the accessory-liquid feed unit is configured to **drip** the accessory liquid onto the external surface of the front end of the rotary atomizing element.

As to claim 27, the applied references, especially *Bert*, fail to disclose, teach or suggest that said at least one discharge outlet comprises an **elongated slotted nozzle describing an arc** extending peripherally of the atomizing edge.

As to claim 28, the applied references, especially *Bert*, fail to disclose, teach or suggest that the elongated slotted nozzle comprises an elongated slotted nozzle **completely enclosing** the atomizing edge. See page 3, lines 14-15 and 19-20 of the specification.

New independent claim 26 is patentable over the applied references, because the references fail to disclose, teach or suggest a method of spraying coating liquid, comprising spraying the

coating liquid in form of a spray jet from a liquid atomizer of a spray system onto an object to be coated; and controlling a property of said spray jet by metering an accessory liquid into the spray jet; wherein said accessory liquid being metered into said spray jet at a location outside said liquid atomizer; said coating liquid is **paint** and said metering comprises **thinning said paint** by said accessory liquid; and said metering is performed **during said spraying**. See page 2, line 19 of the specification.

Each of the Examiner's rejections has been traversed/overcome. Accordingly, Applicants respectfully submit that all claims are now in condition for allowance. Early and favorable indication of allowance is courteously solicited.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

LOWE HAUPTMAN GILMAN & BERNER, LLP

Benjamin J. Hauptman
Registration No. 29,310

Benjamin J. Hauptman
USPTO Customer No. 22429
1700 Diagonal Road, Suite 310
Alexandria, VA 22314
(703) 684-1111 BJH/KL/klb
(703) 518-5499 Facsimile
Date: June 29, 2004